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Work Relationships

V. W. BLADEN, M.A., F.R.S.C.

Professor of Political Economy and Director of the Institute of Industrial Relations University of Toronto

FIRST let me identify myself. A member of the staff of the department of political economy since 1921, working in the narrow field of economic theory, I was drafted two years ago to direct a new Institute of Industrial Relations. (Let me say immediately that the establishment of this Institute did not mark the beginning of the study of industrial relations in the University of Toronto: valuable work had been done in various departments for many years by such men, to mention only three, as Professor Finkelman, Professor Line and Professor Logan.) The purpose of the Institute was to support and to extend the work being done; to stimulate graduate study, to promote research, and to develop those contacts with business management and union leaders which are necessary if our research is to be anything more than a "library" process, and if teaching is to be fertilized by what Elton Mayo called "knowledge of acquaintance" as distinguished from "knowledge about". This last point scarcely needs elaboration before a medical audience; it reflects a concern on the part of some social scientists to appropriate to their use some part of the "clinical" approach of medical research, teaching and practice.

Though an economist by profession, I had for a long time subscribed to the view that economics is a small (but important) part of social science. It was therefore not too difficult for me to decide to put a good deal of the Institute's money into the study of what has come to be known as "human relations in industry", in which the contributions of anthropology, psychology and sociology appear to be more valuable than does that of my specialty, economic theory. I had been impressed by the work of Dr. Elton Mayo and his colleagues in Harvard, and by that of Professor Lloyd Warner, Dr. Burleigh

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Gardner and others at The University of Chicago. Perhaps my good fortune in hearing a report to a staff seminar in The University of Chicago by Miss Edith Lentz, who had spent more than a year in intimate study of work relationships in a hotel (study by observation and interview, mainly non-directive interview), helped me to make up my mind more quickly that this was a type of work which should be developed (alongside the other types of work already being done) in Toronto. In carrying out this decision I was again lucky in securing the services of Mr. Farrell Toombs, whose experience as a counsellor at the Hawthorne plant of the Western Electric Company and as a research assistant to Dr. Burleigh Gardner for "in-plant" studies similar to the "in-hotel" study of Miss Lentz, qualified him to promote and direct similar studies in Toronto. My luck held, and we found a number of young men anxious to engage in such research and admirably qualified for it; and, more slowly, we found a number of industrial firms willing to co-operate. So in the last year we have had two men engaged in "in-plant" research in two firms in the men's clothing industry, and one engaged in such research in the three Brantford plants of the Massey-Harris Company; while Mr. Toombs with another research assistant has been conducting research in one of the Toronto plants of the Canadian General Electric Company. We hope to continue, and to extend, our work in industrial plants. We are also interested, in co-operation with Dr. Agnew and Dr. Bradley of the course in Hospital Administration, in undertaking an "in-hospital" study. Such a study of human relations in hospitals is at present in progress in The University of Chicago, sponsored and financed by the American Hospital Association; and one of our research men is most anxious to undertake a similar study here. We hope that we shall be able to secure the co-operation of one or more hospitals so that he may have the opportunity for such a study.

From all of this it will be obvious that I, an economic theorist, new to industrial relations, even newer to human relations in industry, ought never to have accepted your invitation to talk about "work relationships". My knowledge is too much "knowledge about". However, as I have worked with my new colleagues, and participated in discussions of human relations with a group of men and women from industry, I have realized that I have some slight "knowledge of acquaintance" too, if I can put it to work. This "knowledge of acquaintance" comes from looking with new eyes at the problems of human relations in the University. (An "in-university" study would be most revealing but no professor could make it.) It also comes from looking with new eyes at the human relations problems of my family. I am amazed how much my experience as a parent has enabled me to understand certain industrial problems, and how much my behaviour as a parent has been affected by my study of human relations in industry. But of health units I know almost nothing, and of their internal organization I know still less. How, then, can I be useful to you?

Well, the problem we are interested in is common to all administrators, whether they administer a department in a university, a plant in industry, a hospital or a health unit. The problem is that of securing the effective collaboration, or co-operation, of a number of people. The administrator is

chosen, and necessarily so, for his ability to meet the technical problems which he must solve. It is generally assumed that his "authority" will be accepted, his orders carried out. That they so frequently are carried out and that so much co-operation exists, is due largely to two things: first, that there are strong social influences tending to condition people to accept authority; and second that many of the individuals put in these positions have an intuitive skill in dealing with human relations. Now the problem of modern society lies in the dissolution of many of the established codes of social behaviour under the impact of rapid change in technology, organization and way of life. "Authority" in the family, in the teacher-pupil relationship, in the work relationship between superior and subordinate, has lost much of its power. To achieve the same degree of co-operation requires therefore more skill. But at the same time collaboration in bigger units is becoming technically necessary, and collaboration in new kinds of units, for which there is no established pattern, must be secured. And so there is a developing preoccupation with skills of supervision, skills of leadership, skills in human relations.

During the war there was a great boom in supervisory training. The vast expansion of industry required many more foremen, while the work force was more difficult to handle, with the intense pressure to produce, the passing of the depression discipline of fear of unemployment, the personal worries and strains of war, and the drafting for industrial work of large groups of people unused to the discipline of industry. No wonder, then, that there was a demand for "supervisory" training. It was met in part by the government-sponsored training program, devised for Washington and borrowed by Ottawa, J.R.T. No doubt it helped. Perhaps in the emergency one could have done little more; but two or three things may be said about it lest it be thought that skill in human relations can be learnt in a few easy lessons, and can be embodied in four rules on a card.

My first comment is this: we need to understand a good deal about our own failure to behave the way we know we ought to behave. When I as a parent behave unreasonably to my children, which is only too frequently, it is not because I do not know better. It is usually because I have had a tough day at the office and have come home tired and worried. Similarly the supervisor who behaves unreasonably almost certainly knows better, but is probably carrying into the plant worries from home or is working off on a subordinate his feelings about his unreasonable treatment by a superior. Well, this is my first plea. Those of us who have a responsibility for developing and maintaining co-operation must become aware of the pressures on us, and must learn to accommodate ourselves to them without compensating for them by putting pressure on others. That essentially is what Professor Selekman means, I take it, when he says, in his book *Labor Relations and Human Relations*, that we want "emotionally mature managers": that is, we need adult behaviour rather than childish behaviour.

The second comment is that we need to understand more about the people we have to supervise. The leader must, to quote Professor Selekman again, be "down-to-his-soles aware of how it would feel to be one of the led." Rules of conduct listed on a card are no substitute for such understanding.

Indeed, there are generally many different ways of handling any given human situation each of which may prove successful; there is probably a best way for each one of us but since we are different there is almost certainly not one best way for all of us. Each of us, however, is more likely to handle the situation better, the better he understands the "feelings" of the people he has to deal with. It must also be understood that these "feelings" are not purely individual but are in large part conditioned by the social structure of the group (or groups) to which that individual belongs, and particularly of the social structure of the work group. So when Dr. Burleigh Gardner was asked to set up a program for training supervisors in hospitals, he insisted that the first requirement was a research program. The supervisors must understand, and the trainers of the supervisors must understand, the peculiar social structure of the hospital. Hence the "in-hospital" research to which I referred earlier. Hence the necessity for an "in-health unit" study if any serious contribution is to be made to the improvement of work relationships in those units. And notice that the research would not be intended to produce a set of rules, but an improved understanding. It would depend on the administrators whether new work relations would develop as a result of such understanding. Perhaps no change is necessary. In that case our research might show us the basis of the high degree of co-operation existing and might suggest useful techniques that could be applied in, or adapted to, other situations. (We do not only want to study cases of low co-operation but also cases of high co-operation; we want to study health as well as disease in co-operative groups.) In that case, too, we might be able to assist in training future health officers, by the use of case material accumulated in the course of our researches, and thus to help in transmitting the skills the results of which we had been studying. But perhaps there are some problems. I have heard rumours of high turnover which in industry we would consider a clear symptom of defective morale. Perhaps my invitation to speak to you on this subject is another symptom. In either case, whether all is rosy-hued or whether there are some worrying problems, we would welcome an invitation to study some of your units, and to contribute to the training in human relations of candidates for your profession.

But if any real contribution depends on a study of your peculiar problems, there is much that should prove suggestive in the literature of "human relations in industry".

* * *

I think that it would be best for me to discuss a specific case from industry, and I choose for this purpose Dr. Mayo's "first inquiry". My reason for choosing it is: first, that it raises some of the important points of general application; second, that it may lead some of you to read the two influential books of Elton Mayo, *The Social Problems of an Industrial Civilization* (in which this "first inquiry" is reported) and *The Human Problems of an Industrial Civilization*.

This is the case of a mule-spinning department in a textile mill near Philadelphia. In a well-run mill with unusually enlightened management, this one department was a constant worry. In a mill with a labour turnover of approximately 5 per cent, this department had a turnover of 250 per cent. The turn-

over became particularly heavy when the mill was busily employed and most in need of men. Apparently this condition was common to other textile mills in the area and by most managements was accepted as inevitable. The management of this particular mill refused to accept the situation as inevitable. On several occasions firms of industrial engineers had been consulted, and had introduced various forms of financial incentive. These schemes had neither reduced turnover nor increased output. There was a bonus system in operation at the time when Harvard entered the picture which provided that if production in any month exceeded a carefully calculated "possible," each worker would receive a percentage bonus equal to the difference between 75 per cent of possible and the actual percentage of possible achieved. Thus 80 per cent efficiency for a month would mean a bonus of 5 per cent. No such bonus had ever been earned; indeed, productivity of the department rarely exceeded 70 per cent.

The course of the Harvard inquiry cannot be told in detail, but certain aspects call for emphasis. Essentially it involved asking the workers concerned to express their feelings. The efficiency experts had not consulted the workers: they regarded the workers as unreasonable and their statements as unreliable. As statements of fact they probably were completely unreliable; as evidence of feelings and as symptoms of the trouble which had to be diagnosed they were of great, but unrecognized, importance. The Harvard group gradually got the workers to talk freely to them, the confidential nature of the interviews being clearly understood. They listened carefully, with full attention to anything the worker wished to say, however irrelevant or outrageous it might seem to be. In the process they learnt that these workers all complained of foot trouble of one kind or another; they all appeared to have uniformly pessimistic preoccupations; they had a low opinion of their work; the job was essentially solitary (though there might be three workers in an alley between machines, the amount of communication between them in a day was nil); they all claimed that they were too fatigued to enjoy social evenings after work; they were liable to sudden fits of anger, generally directed at some immediate supervisor and frequently leading them to leave the job.

In view of the emphasis on fatigue, the Harvard group decided to experiment with rest periods, two ten-minute periods in the morning and two in the afternoon. In the rest periods the workers were permitted to lie down; indeed, they were encouraged to sleep and most of them were able to do so. The experiment was made on a group of one-third of the workers in the department. The effect was immediate and favourable: the symptoms of melancholy preoccupation disappeared, turnover was practically nil, and production was increased. But perhaps the most striking feature of the experiment thus far was the almost equal improvement in the behaviour of the two-thirds who did not get any rest. They discussed the experiment at lunch with those who did get the rests, and they relied on the system being extended if it proved satisfactory. It was so extended and in the next five months the department earned, for the first time, bonuses of from 4 per cent to 7 per cent.

The supervisor was not very happy about workers sleeping while the machines ran. He had to accept the rest period, but he made it conditional

on certain "tasks" being finished in a given time. The rest was to be "earned". This worked fairly well since the workers usually did earn the rests. Then under pressure to increase production the supervisor cancelled the rest periods. Within a few days production fell off and the old pessimistic preoccupation reappeared. The rest periods were reinstated but the principle that they must be earned was emphasized. There was some improvement, but there seemed to be no confidence that the system would be continued and the general feeling was of discouragement.

The president of the company intervened at this point. As a result of a conference with the supervisors and the Harvard group, it was decided to experiment for one month with a complete stoppage of the machines for ten minutes four times a day, during which period everyone must rest. It seemed to almost everyone, including the workers, that 40 minutes lost by 40 men each day for a whole month must involve a decrease in production. The machines could not be speeded up. In fact, production increased from the 70 per cent to which it had fallen to 77½ per cent. Morale improved and absenteeism diminished. As a result of this favourable record, the president ordered a return to the system of alternating rest periods with no stoppage of the machines, but with two important changes: first, the rest periods were guaranteed and did not have to be earned; second, each group of three men in an alley was to determine for itself the method of alternation. The result was to make 85 per cent of possible, and a 10 per cent bonus, about as regular as 70 per cent and no bonus had been. Labour turnover fell to the 5 per cent average of the mill generally. There were effects outside the mill too: one worker told how he had begun to take his wife to "movies" in the evening, a thing he had not done for years; another gave up his customary "alcoholic week-end".

It would be easy to assume that "rest periods" was the answer to the problem of turnover. But it is important to note certain other changes: let me quote Elton Mayo, and then comment.

"We had listened carefully and with full attention to anything a worker wished to say, whatever the character of his comment. In addition to this we—supported by the President—had demonstrated an interest in what was said by the introduction of experimental changes. . . . The Colonel [the president] had also demonstrated unmistakably a sincere interest in his workers' welfare. . . . In addition to this—and we did not see this clearly at the time—the president had effected another important change. He had helped to transform a horde of 'solitaries' into a social group. He placed the control of rest groups squarely in the hands of the workers in an alley with no one to say them nay. This led to consultation not only between individuals but between alleys throughout the group."

The important points in this Philadelphia study were confirmed in the classical study at the Hawthorne plant of the Western Electric Company. Many of you have no doubt read of this experiment; but let me remind you of the bare outline. There was first an experiment in lighting: as lighting was improved in the experimental room, production increased; but, as in the Philadelphia case, production also increased in the "control" room. Then they reduced illumination in the experimental room and production went up still further. A second experiment involved submitting a segregated group of workers to different working conditions. The investigators having secured

the co-operation of six workers proceeded to vary the conditions of work one at a time and then hold them constant for a considerable period: varying frequency and length of rest periods, length of working day and working week, food with soup or coffee in the morning. Output increased and the girls claimed that they were less fatigued. Then, in period XII, the original conditions of work were restored, a forty-eight hour week, without rests, lunches, or any of the amenities which had been introduced in earlier periods. And productivity increased still further over the 12-week period! What had happened was that the six individuals had become a "team" which co-operated spontaneously in the experiment. The most important changes in the experimental room were not the ones that were being made as the "experiment;" they were the changes that were made in order to permit the experiment. The girls were consulted about the experimental changes which were to be made, and some proposed changes were abandoned because of their disapproval. They were questioned sympathetically about their reactions to the varying conditions; their physical health became a matter of concern; their opinions, hopes and fears were sought; they were allowed to talk at work and their "bogey" was eliminated; supervision was revolutionized.

This experiment is reported in many places: the fullest account is in Roethlisberger and Dickson, *Management and the Worker*; a chapter in Mayo's *Social Problems* discusses it; a popular account is in Stuart Chase, *Men At Work*. Let me quote from Mayo one comment:

> "Here then are two topics which deserve the closest attention of all those engaged in administrative work—the organization of *working teams* and *free participation* of such teams in the task and purpose of the organization as it directly affects them in their daily round." (My italics.)

* * *

Let me end this paper with a brief comment on a technique which was used in these two inquiries, the technique of non-directive interviewing. Developed as a research technique, it was recognized as having therapeutic value. The presence of the researcher in a plant, interviewing, changes the conditions which are being investigated. This complicates the problem of research, but makes it easier to secure permission to conduct such research. The recognition of its therapeutic value led to the establishment of a vast "counselling" service in the Western Electric Company. Such counsellors do not give advice; their function is to interview "non-directively", to encourage their clients to talk about their problems and to "listen". While this counselling at Hawthorne grew out of the "experiment", a similar technique was being developed for the treatment of some mentally disturbed patients by Carl Rogers and others. But it is not as a technique for research, nor for therapy, that I want to talk of it. The administrator cannot use it for these purposes within his own organization. Because he has the power, indeed the obligation, to reward and punish, his subordinates cannot talk to him freely as they can to the researcher, or to the counsellor whose position is strictly neutral. But some acquaintance with the method can prove useful to any supervisor, indeed to any one who deals with people. Dr. Burleigh Gardner, in his *Human Relations in Industry*, puts it like this:

"Probably one of the most important ideas which most people obtain from training in this method is the realization that they must understand other people to be effective in dealing with them, and that they can get this understanding only by listening to what they have to say. Closely allied with this is the realization that arbitrary orders, logical arguments, or exhortations do not change a person's attitudes nor convince him that he is wrong. . . . With the training comes, too, the realization that one has to get below the surface of complaints, antagonisms, lack of co-operation, and similar difficulties in order to know what to do about them. Those in positions of authority are accustomed to taking complaints at their face value and dealing with them at that level. If a subordinate complains that he needs more money, or that the work is too hard, or his machine is no good, his superior usually accepts that as an accurate statement of what is thought to be wrong, and he either corrects the condition, tries to prove that his subordinate is mistaken, or decides there is nothing he can do about it. If the subordinate refuses to accept such actions, he is labeled as a 'griper' who cannot be satisfied and must therefore be ignored. Once the supervisor realizes that there may be other things behind the manifest complaints, and that by interviewing he may get to the real root of the problem, then he is encouraged to try to deal with these difficulties instead of avoiding them. Not only do these efforts enable him to handle complaints more effectively, but his increased interest in trying to understand his subordinates improves his relations with them and reduces the frictions and disturbances growing out of the supervisor-subordinate relation."

The technique of non-directive interviewing is not easily acquired, it involves more than a knowledge of a few rules. But the essential character is best understood by looking at some of the rules, and perhaps for administrative (rather than research or therapeutic purposes) even a minimal dose may be helpful. Let me end, then, by paraphrasing the five rules laid down by Professor Roethlisberger in his paper on "A Prerequisite of Leadership" in his book, *Management and Morale.*

The first rule is that the supervisor should listen patiently to what his subordinate has to say before making any comment himself. Probably the quickest way to stop a person from expressing himself is to interrupt. He should not only listen to, but show interest in, and try to understand, what he hears.

The second rule is to refrain from hasty disapprobation. If an employee says, "This is a hell of a company to work for," the supervisor should not counter with, "That's not the right spirit". Rather should he try to get the man to express himself more fully. If encouraged to talk, the employee may get some emotional relief and the supervisor may detect the real cause of dissatisfaction.

The third rule is not to argue. It is futile to change sentiments by logic. The best way for the supervisor to avoid arguments is to make sure that the employees' sentiments do not act on his own. Bill comes to the supervisor and complains that his wages are too low. Too often the supervisor will give a logical explanation of the basis of wage determination, perhaps with a little heat because he resents the charge of unfairness.

This leads to the fourth rule, not to pay exclusive attention to the manifest content of the conversation. Perhaps if Bill were encouraged to talk, he would have told about his wife's illness and the accumulating bills. It may not have been the unfairness of the rate, but the immediate necessities of the worker. It may be that there is a fund to take care of such cases that Bill knows nothing about. But if Bill is merely given a logical answer to his manifest question he goes away disgruntled and his problem remains unsolved.

The fifth rule is that the supervisor should listen not only to what a person wants to say but also to what he does not want to say or cannot say without help.

So, as a result of the interviewing experience at Hawthorne, "a new conception of leadership was developed. . . . They found that one of their functions as supervisors and managers was to listen to, and become better acquainted with, the sentiments of their employees". If I can persuade some of you to try "listening", I may have done something to improve "work relationships" in your units, and thereby contribute to your efficiency, to the welfare of your staff, and to the health and happiness of you, the administrators.

Letter from Great Britain

The Nurse in Great Britain

FRASER BROCKINGTON
M.R.C.S., Eng.; L.R.C.P., Lond.; D.P.H.; B. Chir., M.D., Camb.;
M.A., Camb.; Barrister-at-Law
County Medical Officer
Public Health Department, West Riding of Yorkshire
Wakefield, Yorkshire, England

AS in most spheres of medicine in England, nursing has been under close examination. The immediate cause of this has been the grave shortage of nurses, for which a variety of reasons has been put forward. There was in 1945 a total civilian nursing strength of 174,000 (3.6 per 1,000 population, a rate twice that for 1900) and of these 78,000 were 'trained', that is, on the general (or supplementary) registers, or certified midwives. Forty-eight thousand of the trained nurses worked in hospital, 24,000 in public health, and the remaining 6,000 mainly in private nursing. The public health nurses were distributed as follows: 3,500 in industry; 2,000 in schools; 1,000 in nurseries; 3,000 in health visiting; 14,000 in home nursing and midwifery (combined or separate); and 300 in children's homes. The year 1945 had just under a quarter of a million occupied beds in hospitals and institutions (other than mental, maternity and convalescent), an increase of 56,000 since before the war and a decrease of 11,000 nurses to attend to them.* This situation seemed so precarious that a working party was appointed in January, 1946, to study the recruitment and training of nurses; this reported to the Ministers of Health and Labour and National Service in July, 1947 (H.M. Stationery Office). The report was accompanied by a one-man minority report by John Cohen of Leeds University in March, 1948 (H.M. Stationery Office). These have been followed by a Nurses Bill, now before Parliament, and a further working party report on midwives presented to the two Ministers in November, 1948.

It is a far-off cry now to the days at Charing Cross Hospital, London, one hundred years ago (recently described at the Harrogate 1948 Conference of the Royal Sanitary Institute by Lord Inman, a benefactor and governor of the hospital) when nursing was done by untrained 'watchers' paid 5*s.* 0*d.* a week, living out; when patients were admitted on one day a week, often to beds just vacated by fever cases, and bed linen was changed when worn out. This was

*A return of the Ministry of Health of staff employed in civilian hospitals on 30.9.48 showed 131,622 nurses (112,866 full-time, 18,756 part-time) and 8,374 midwives (7,565 full-time, 809 part-time) for a total of 413,523 occupied beds of all sorts. The full-time nurses consisted of females 30,770 trained, 37,585 students, 9,857 assistants, 4,381 trained midwives, and 3,184 pupil midwives; of males 9,681 trained, 5,090 students, and 2,362 assistants. There was an overall shortage of 41,252 females, 4,164 males and 2,695 midwives; 45,876 beds were vacant with staff available, and 57,250 were vacant for lack of staff.

ten years before Florence Nightingale on her return from the Crimea, wrote, at the age of 38, her 'Notes on Nursing' when she said "the very elements of nursing are all but unknown". Since that time the profession of nurse has become an honorable career in such general demand that the whole life of the nation has become dependent upon it. The nurse in England was first protected by state registration in 1921 by an Act which established the General Nursing Council and the term 'nurse' was limited by statute to a person on the state register in 1943. By a process of fission the parent profession has produced daughters; the health visitor, the home nurse, the midwife, to which statutory recognition has been given with special forms of training superimposed upon the main nursing qualification. To meet the needs of special hospitals, the assistant nurse, the mental nurse, the tuberculosis nurse, the fever nurse, the orthopaedic nurse, and the children's nurse, have also been evolved. Supplementary state registers have been created for the mental nurse (in both mental deficiency and lunacy) and for the fever and children's nurse; but this status has been refused in recent years to the tuberculosis nurse with the certificate of the tuberculosis association and to the orthopaedic nurse; a matter which has been the subject of controversy. The number of male nurses has been steadily growing (from 1,000 odd in 1900 to about 18,000 in 1948). The position of the mental nurse is very anomalous; it has developed in isolation, due to an age-old segregation of the mentally disordered and defective; it has recruited staff with 'a significantly lower average intellectual calibre'; it has had two separate and distinct qualifications—that of the Royal Medico-Psychological Association and that of the General Nursing Council supplementary registers (in 1943 there were 45,000 R.M.P.A. and 10,600 enrolled on the register of the G.N.C.); discontent and apathy among nurses in this field has been 'much deeper and more widespread' than elsewhere.

The midwife herself was a long time being born when, in 1902, the first Midwives Act created the Central Midwives Board and a register of certified midwives. The doctors of those days, who had witnessed, with nothing but joy, the evolution of the 'watcher' to become as the nurse their trusted professional colleague, were unable to see any good to come our of a similar evolution of 'mother Gamp' into another form of professional colleague. Here in England, where 80 per cent of babies have for many years been delivered by midwives, it is difficult now to recapture the antipathies of those far-off days; but no doubt the writings of Dickens and the well-recognised iniquities of untrained helpers at childbirth, clouded our predecessors' judgment. Their training (since 1938) has been divided into two parts; the first, including all the theory, is spent entirely in hospital, and the second is spent largely in practical work on a district. A state-registered nurse can take both parts in six months each and there is provision for anyone with no previous training to spend 18 months in part I. In part I the pupil must conduct ten labours and nurse a further twenty cases through the puerperium; in part II she conducts twenty labours (ten at least in the patients' own homes) and she attends twenty other lying-in cases without necessarily taking the delivery. There is an examination after each part; that after part I is also the minimum requirement for proceeding to the training of a health visitor. The qualification is state certified midwife (S.C.M.).

Health visiting began in England some time in the last century in response to a general national alarm at the great wastage of infant lives, itself the result of the conditions arising out of the industrial revolution. Florence Nightingale had early seen the need for teaching 'household hygiene' by personal visits, yet the earliest work was not done by a nurse but by ladies of good position who saw in such work the fulfilment of a great social need. No doubt it began in varying ways and in different places at about the same time, but it is the ladies of Manchester and Salford who are generally accorded the honour of being pioneers. Here in 1862 they formed the Sanitary Reform Association at the suggestion of a leading Manchester surgeon (Mr. Turner). Unable any longer to bear the sight of the little marasmic, dehydrated, puny creatures that came to spend in his beds their last hours, one can hear him exclaiming "Go to the homes of these babies, seek out the causes of these wretched tragedies in the mishandling of ignorant parents; don't wait until the evil is done and then bring them here to die." In 1891 Florence Nightingale, now an old lady, wrote to the Chairman of the County Technical Instruction Committee in Buckinghamshire to emphasise the possibilities of health visiting. "It is hardly necessary," she said, "to contrast sick nursing with this . . . the needs of home health bringing require different but not lower qualifications, and are more varied". Soon after this the nurse had entered this important field of work; many were asked to take a sanitary inspector's certificate but it was soon found desirable to make a separate postgraduate qualification. The Royal Sanitary Institute began a course in 1907. The present training has been in force by Ministry of Health regulation with little alteration since 1924; it is obtainable by state registered nurses with part I midwifery after a course of six months.

Home nursing also began in Victoria's day, under the auspices of a great voluntary body, the Queen's Institute of District Nursing, which today trains about 90 per cent. of all home nurses; this body has 44 key training homes and 56 associate training homes in which state registered nurses live for six months attending lectures in sociology, public health, and such special subjects as nutrition and dietetics, tuberculosis and venereal diseases, with practical training and experience of nursing in the home. As the training suggests, the work of home nursing has from the first been closely associated with health visiting, with which in many rural areas it is still combined; but where this is the case the home nurse is obliged also to take the additional training for the health visitor's certificate.

The assistant nurse, with an inferior type of nursing training, developed largely owing to the separate evolution of chronic sick nursing in public assistance institutions taken over from the poor law. She received statutory recognition in 1943, when the title 'assistant nurse' was created and a separate roll of assistant nurses was opened. The General Nursing Council laid down two years' training followed by a simple written test and a test of practical efficiency. She is comparable to the practical nurse in the U.S.A. and Canada. Seventy-five assistant nurse training schools have been opened but have been greeted with little enthusiasm; in general the concept of the assistant nurse seems too vague for general acceptance here.

The present training for full state registration takes a minimum of three years in a general hospital approved for the purpose by the General Nursing Council (561 such nurse training schools exist). The embryo nurse engages in full nursing duties except for short periods spent in a preliminary training school (itself of recent origin); she is essential to the work of the hospital and, as things are now, if her services were to be withheld a large number of our present hospital beds would close for want of adequate service. Even today much of her reading and study, and some of her lectures, must be undertaken in her own time. In accord with long established practice, she undertakes many menial tasks, further emphasised in recent years by lack of domestics; she is subject to a rigid discipline and is usually expected to live within the hospital curtilage. The situation existing in regard to the supplementary registers is almost too complicated for any short analysis. The state registered children's nurse training is not dissimilar from that of the general trained nurse, except that it takes place in approved children's hospitals (of which there are 31); the first two years of both forms of training are practically identical. Yet when a nurse has acquired state registration for general nursing she is still required to do two further years in a children's hospital to secure registration on the supplementary children's register and vice versa. The training for mental nursing takes three years in an approved school (of which there are 137 for lunacy and 26 for mental deficiency), and that for fever nursing takes two years (147 schools); in each case one year overlaps completely with the first year of general training. These anomalies are repeated throughout the whole network of training schemes.

It is against this background that we must view the revolutionary suggestions of the working parties' reports. That on nursing found the chief cause of our present difficulties to lie in wastage during training due to an outworn system of discipline; for this they recommended full student status (the present nursing techniques were found to absorb 4,100 hours in order to impart knowledge which the average student could absorb in 1,600 hours). This would entail schools of nursing separate from the general nursing system with the student no longer an employee of the hospital and therefore no longer a source of cheap labour. They ask for a three-shift system to give a normal working week of 40 hours with six weeks' annual holiday; a two-year basic training, from which domestic and other utilitarian nursing duties have been removed, and of which the first period of eighteen months should be devoted to 'fundamentals common to all fields of nursing', the second period of six months to training in a chosen field, with the state (S.R.N.) examination to take place in two parts, one at the end of each period; licence to practise to be given after a further year's work under supervision. The present course they said "is designed to prepare for bedside nursing . . it is rooted in a tradition which knew little of preventive medicine or positive service for maintaining the health of the community"; and since of all qualified nurses in civilian employment about 60 per cent. are working in hospitals and 40 per cent. in the public health fields "it follows that the traditional conception of nurse training, itself determined by the function of a trained nurse, must be adapted to meet the new situation". Thus, in the suggested new course 'health nursing and sick nursing must be

considered side by side'. It is not without its chastening influence to remember that Florence Nightingale said much the same 90 years before. "The causes of the enormous child mortality are perfectly well known," she said in her 'Notes on Nursing'; "they are chiefly want of cleanliness, want of ventilation, careless dieting and clothing, want of white-washing; in one word, defective *household hygiene*." "The same laws of health or of nursing, for they are in reality the same, obtain among the well as among the sick." Now, in 1948, we are again emphasising the same fundamental need. It is suggested that in each hospital region selected hospitals and public health agencies should be grouped to form composite training units covering the whole nursing field. The parallel for this would be the Institutes of Education now being formed for the training of teachers. At different stages the nurse, like the teacher, will pass from one type of institution or service to another. The report wished to see each unit under a director or principal and an education committee, and asked that a pioneer unit should be started in each region as soon as possible. The course of training suggested would run as follows—

> *Introductory* period of 3 months (basic sciences, theory and practice of nursing, educational visits and introduction to wards); 9 weeks of *paediatrics* (nursery schools and nurseries, children's out-patients and wards); 4 weeks of *obstetrics* (ante and post natal clinics, maternity wards); 4 weeks of *communicable diseases* (immunisation clinics, tuberculosis dispensary, wards); 10 weeks of *medicine* (out-patients, wards and diabetic department); 13 weeks of *surgery* (out-patients, wards and operating theatre); 4 weeks of *gynaecology* (out-patients, wards); 5 weeks of *public health* (survey of whole 'field' of health visiting and school nursing, home nursing); 8 weeks of *psychiatry* (child guidance and out-patients, admission block and wards).

The last six months would be spent in the chosen field (general medical and surgical nursing, public health, paediatrics or psychiatry). One valuable effect of this new student training would be 'that all nurses who qualify would have a uniform qualification and one common register would replace the present general and supplementary registers'. This would, for example, include the mental nurse and would do much to eradicate 'the idea that mental nurses occupy a lower status than those who nurse the bodily sick'. The training of the assistant nurse is recommended to be discontinued and the roll of assistant nurses closed. The creation of a true student status for probationer nurses would only be possible by strengthening existing staffs of trained nurses (by some 24,000) and by a liberal use of 'orderlies' or 'nursing aides' (some 14,000) who would replace the assistant nurse grade.

The effect of this tidy little report has been to some extent confused by the minority report of John Cohen, M.A., Ph.D. Cohen says that you cannot study the nursing problem in a vacuum; that it must be examined in relation to the whole of the health needs of the community and again in relation to needs of woman power generally. This means, he says, that we first need to know the answer to certain fundamental questions, and he instances particularly four unknowns: how many hospital beds are wanted?; what is the relative value of nursing in prevention as against cure?; what are the advantages

of industrial nursing?; and what are the possibilities of home nursing? Only when these questions have been studied can anyone predict what nurses are needed, how to get them and how to select and train them. He then goes on to say that the answers to these problems cannot be made to depend upon 'opinion' of whose value he himself holds the lowest opinion. Look, he says, at the varying pontifical announcements that have been made on the need for hospital beds; in the seven hospital survey areas (out of 11) in which the ratio of beds for non-mental cases per 1,000 of the population has been set out (Hospital Surveys 1945 and 46, H.M. Stationery Office) the ratios vary between 6.6 and 10.1; an even higher figure of 11.6 can be computed from the figure of 8.6 for acute hospitals given by the Leeds Voluntary Regional Hospitals Council and 3 for chronic sick given by the Area Committee of the British Hospitals Association. By taking the lower figure of 6.6 we can estimate a need for 317,000 beds; by the upper figure of 11.6 the need would be for 560,000 beds; or in terms of hospital beds, upon which all sick nursing requirements must be gauged, this would mean the difference between building a further 150, or alternatively 640, new 500 bedded non-mental hospitals. Such variations make nonsense, he contends, of any scheme for providing nurses based wholly upon 'opinion'. Let the problem be examined scientifically; he then gives an example of a social scientific survey based upon a statistical analysis of the duration of stay in various hospitals according to the nursing standards.

Anyone reaching this stage of Cohen's report in a sceptical frame of mind (and busy asking himself how you can make a wholly scientific study of a subject which remains at bottom an art) is somewhat shaken to find statistical proof that an increase of nine trained nurses per 100 in general training hospitals (i.e. from 19.5 to 28.5) would lead to a reduction of stay on the average of one day (from 17.6 to 16.6 days). Furthermore, his figures show that the student nurse has little or no effect on the patient's duration of stay; that the non-trained mental nurse is more effective, as judged by duration of stay, than a trained mental nurse; that no increase in any grade of nursing or medical staff is likely to lead to a reduced patient stay in sanatoria. This estimate of hospital costs in terms of economics, of individual contributions to the national wealth, must seem soulless to many, but it is salutary to remember that a nation can only have of any social service what it can pay for in terms of industrial output. As Cohen infers, the hospital can be likened to a factory with an economic value to the nation; the nurse should be seen as an industrial worker. Many view the scientific approach with distrust, some genuinely feeling that it is like playing with fireworks and others fearing its consequences to themselves. If we are to be tested in terms of our cash value to the nation, can we all feel sure of continued employment? Many people, and far too many doctors, have a rooted distaste for figures, based largely upon the past failures of our education. At least an attempt along the Cohen lines has been made to study what the nurse actually does do, a fact upon which there is almost as much uncertainty as in the matter of what she ought to do. This uncertainty runs like a thread through all the reports; to elucidate it the Minister of Health asked the

Nuffield Provincial Hospitals Trust first to conduct a detailed 'job analysis' of the work of hospital nurses (which is now finished but not published) and, second, to do the same for public health nursing (this is now in progress).

This gives point to a controversy now raging here over the training of the health visitor and what should be her relationship to the hospital almoner and other social workers. The work of the health visitor, which began with infant visiting, soon expanded to include other forms of work for 'priority classes'; the infant welfare centre which Pierre Budin, professor of obstetrics at the University of Paris, started in 1892 as a *goutte du lait* (to be followed seven years later with the first milk depot at St. Helens, Lancashire) and which absorbed the 'school of mothercraft', begun in London a little later; the antenatal clinic, which another obstetrician (Dr. Ballantyne) began in Edinburgh in 1913; the work of child life protection, the school health service, and the visiting of tuberculous patients. For nearly 30 years this field of work has remained, expanding here, contracting there, but yet circumscribed; it has come as a shock to many to realize that forces are at work which must make for change. The first of these great forces is the National Health Service Act and the second is the development of parallel forms of training for what has come to be called 'social work'. To take the second first. It has become an established practice in this country to offer a two years' course of training at our universities for a diploma in social science which incorporates a study of the science of society with practical social work. Social history, social psychology, social economics, social ethics, social statistics, social service, industrial relations and local government, are dealt with by professors in different branches; the practical work is mainly in 'family case work' with approved training agencies such as the 'personal service society', supplemented by time spent with probation officers, housing departments, social settlements, and industrial personnel departments. With this qualification the diplomates can secure a variety of posts after further supplementary training (given in brackets) such as hospital almoners (9-10 months), probation officers (6 months), personnel managers (2 years), club leaders (6 months), boarding-out officers for child care under the Home Office (12 months), housing managers (2 years), mental deficiency and mental health workers, welfare officers under the National Assistance Act, 1948. Much of this work is outside the scope of social medicine except in its broadest sense, but much also, such as almoning, child care and mental work, is clearly within its scope, and work for which a nurse's training is highly desirable. The nursing working party, for example, considered that a mental nurse, trained along the lines they suggested, has 'a place in the public health field' to deal with the 50 per cent. of chronic incapacity which the Feversham Committee found in the insured population to be wholly or partly due to mental or nervous causes. But as they said, 'clearly the training of a mental nurse, if she is to participate in this field of activity, needs to be broadened to take account of new developments'. Now as to the first great force at work, the National Health Service Act. First, let it not be forgotten that the needs of society do not remain static; in the world of preventive medicine the services provided are always operating, so to speak, to destroy themselves and the circumstances of today are in consequence vastly different

from those in which health visiting began. Babies no longer die in hordes in slums and alleys (our infant mortality last year fell to 34); the growth of a midwifery profession demands that the work of ante-natal care shall be done mainly by midwives; the growth of services for the homeless child has transferred the duties of caring for foster children (under the Children Act, 1948) to the Home Office. But as society improves and standards rise new forms of work, previously unconsidered, present themselves. The time may come when health visitors are no longer needed; when all disease has been prevented and social conditions are idyllic. We must always strive after this but it is a long way off and until then Florence Nightingale's conception of 'household hygiene' is capable of continuous expansion. This indeed is what Parliament recognised in sections 24 and 28 of the National Health Service Act which extends the work of the health visitor to cover the giving of advice to persons suffering from sickness, and which added to the work of the local health authority the duty of preventing illness and arranging for care and after-care of all persons in need. This is not the impractical dreaming of some legal draftsman but the expression of a wide national belief in executive social medicine, that is, that all disease shall be stopped before onset, prevented in its early stages from progressing or, where this is impossible, that it shall be rehabilitated with expedition. The health visitor is swept up in this new stream of thought; she cannot resist it; she should not attempt to do so. Her work for the priority classes should go on, but not alone; she must now be concerned with the whole family, with the old and young alike, with the worker, with the patient of the general practitioner, as well as with those entering and leaving hospital. She must be the family case worker of the future; able to supply the hospital with a background report; able to concert with the general practitioner in the teaching of his patients and able to follow up with him those leaving hospital, or industrial rehabilitation units, to ensure care and after-care. If this opportunity offered by the National Health Service Act, 1946, is seized, the health visitor can be one of the most important elements in a new age when the science of medicine is expanding to give all it can to the welfare of society. This is a great moment in nursing; just as great as 1858 when Florence Nightingale first wrote.

This is a subject which I previously dealt with (October, 1948), under socio-medical services and I raise it again because of its bearing upon the training of a nurse. Here you have on the one hand the hospital almoner, and other social science diplomates, with no medical or nursing background, with a university training comprehending all aspects of society, from ethics, through history and psychology, to statistics, and with a real practical study of family case work. They are pouring from our universities. They lack essentials in training. Since all social work impinges closely upon health and since a study of sick nursing in hospital is one of the first methods of getting to know about the trials and tribulations of those whose health has given way, I say unhesitatingly that their present training, if designed for the full field of social medicine, would be better if it had its roots in nursing. On the other hand, the health visitor with no university background, with little case work, and with none of the leisurely study and browsing in libraries to complete her knowledge of the social structure and to get a real grasp of preventive medicine, is almost

equally lacking. There is a real danger, not fully appreciated here, that, because of this deficiency in training, the nurse in social medicine may be replaced by a lay worker. Speedy action is needed to ward off this danger. The health visitor wants, most, if not all, that the almoner is getting.' These considerations have led me to the conclusion that the proper step to take now is to create a new training for socio-medical work which is substantially a combination of that now given to both the almoner and the health visitor. The basis of this should be the eighteen months' basic nursing training as recommended by the Working Party on Nursing, followed by a further six months in learning about special branches of medical work related to social medicine, for example, tuberculosis, paediatrics, infectious diseases, etc.; this particular field of study, which would lead to the taking of the S.R.N. at the end of two years, should be done at a university; with the qualification of a nurse our student must now continue eighteen months or more at the university doing a social science diploma modified to meet the new approach. This three and a half to four years' course would include no part of the midwifery training, since this work must now be left to the midwife and sufficient would be taught in the service itself about the social, medical and preventive aspects of childbearing. This course would contain all the casework that is necessary and I should discard the present custom whereby various societies call upon social science diplomates to undertake an additional apprenticeship before qualification for certain forms of work (including almoning); a university degree should be complete. This is a matter upon which the medical officers of health themselves cannot agree and it is possible and indeed proper that the subject will be studied in detail by a further 'working party'.

The recommendations of the midwives' report are equally drastic in character. There is the same insistence upon complete student status; a school of midwifery, like that for nursing, is recommended to be separate from the hospital system. They concur with the idea expressed so forcibly in the nurses' report, of a common basic training for both nurses and midwives (of 1½ to 2 years) but lamely conclude that 'it is neither necessary nor desirable for a midwife to become S.R.N. before she starts the specialised training'. Why sacrifice for the midwife such a valuable asset? The common basic training is significantly planned to include four weeks' obstetric nursing to give the student as complete a picture as possible of the place of obstetrics in the health services. (This valuable suggestion would play a most important part in any scheme of reorganisation of health visitors' training, for the widespread wish to excuse her the time and labour of a formal midwifery qualification (even part I as now required) is accompanied by an equal desire that she shall be fully conversant with the health education aspects of midwifery.) For the specialised training in midwifery the report asks for one year; fifteen weeks on the general principles of midwifery; fifteen weeks on the district, attending patients in their own homes under the supervision of a domiciliary midwife; sixteen weeks partly on the study of abnormal midwifery and partly preparing for the examination. The separation of the training into two parts, each with a distinct examination, is to be abolished. It is further recommended that the school of midwifery shall be separate from the school of nurs-

ing and also (a flat contradiction of the nursing report) that the Central Midwives Board shall remain independent of the General Nursing Council. A case load of 55 a year in an urban area is to be regarded as sufficient (compare 100 cases recommended in a departmental committee report in 1929 and 66 cases by the Rushcliffe Committee in 1943); attendance on patients, it is suggested, should continue for a month after delivery (compare the usual attendance today of fourteen days). This report, unlike that of its sister today, is unanimous; had Mr. Cohen, or some other scientist with a lively imagination, been a member, no doubt he would have signed a minority report to emphasise that it is no good making a study of recruitment and training of midwives without previously executing a scientific social study to determine whether babies are needed at all and, if so, whether they could not be better grown in bottles.

We come finally to the Nursing Bill before Parliament, upon the outcome of which so many high hopes depend. In the accepted manner of parliamentary legislation it does not, of course, deal with detail. What it does is to devise a new machine, which would be capable (in the opinion of our hard-worked parliamentary draftsmen) of acting with discretion, and, by clothing it with sufficient power, to ensure that it puts the necessary reforms into effect. The Bill, therefore, reconstitutes the General Nursing Council which, as at present constituted, has such a large representation of matrons of London hospitals, steeped in a past tradition; it sets up nurse training committees in each of 14 regional hospital board areas (but quite distinct from the regional hospital boards); and it gives the new body power to establish experimental nurse training schemes. The future General Nursing Council will consist of 34 persons, 17 elected and 17 appointed; of those appointed 12 will be by the Minister of Health, 3 by the Minister of Education and 2 by the Privy Council; of those elected (by nurses on the main register) one nurse will come from each of the 14 areas into which the country is to be divided for this purpose (presumably the 14 hospital areas). The question remains in all our minds: will this new body seize the moment to act with decision and to break away from old traditions?

And when we reduce this lengthy reporting to its lowest terms, what does it all amount to? We see that the fundamental need is for a new qualifying training of two years or thereabouts. If this could be devised, so much else might follow. Upon this basic qualification could be built new and improved organisation, instruction and examination (if needed) for those nurses who wish to branch off into various specialties, into health visiting, midwifery or district nursing, as well as for those going into senior posts of responsibility in hospitals. Hospital training would no longer be seen as an end result only, but also as a beginning for many other services to the community. What a great chance of progress. Yet the time is not without its anxieties, for old tenets and prejudices take a lot of dislodging. As the midwives party has ominously remarked, 'The recommendations of our colleagues (on the nursing committee) that a nurse should be granted provisional registration at the end of two years' training, and before completing the period under supervision, does not appear to be receiving support among the nursing profession'. We can only now, like Mr. Asquith, wait and see!

Some Observations from a Preliminary Study of Infant Mortality in British Columbia, Based on Birth-Death Linkage

J. DOUGHTY, B.Com.
Statistician, Division of Vital Statistics, Department of Health and Welfare of British Columbia, Victoria

OF all the data that stem from the vital statistics records of a Province or region none are more topical than those relating to infant mortality. Not only does the infant mortality rate indicate the wastage of life at the age when life expectancy is near its peak, but it also stands as an accepted criterion of the general level of health in the community.

The most common source of infant mortality information is the death registration. This document yields data concerning the stated cause of death, as well as other necessary facts such as age, sex, nativity, and place of death, yet it lacks much additional information that might be relevant to a better understanding of the underlying factors contributing to the death. An important body of additional information relating to circumstances surrounding the birth, and to the family, is contained on the birth registration. However, since the birth and death registrations are not normally brought together for study, this latter source generally goes unheeded in routine infant mortality statistics.

In order to make available the birth information in the analysis of infant mortality in British Columbia, the Division of Vital Statistics in 1945 began, as a routine measure, to match the death registrations for all infant deaths with the corresponding birth registrations. Accordingly, a single punch card was designed to contain the pertinent items from both registrations. Use of this punch card, which is supplementary to the regular birth and death punch cards, made possible the tabulation of infant mortality by such items as cause of death, birth order, maternal age, hospitalization at birth, legitimacy, place of birth, occupation of father, etc., as well as by any cross-classification of items that might be desired.

A preliminary study has been made, along the lines indicated above, of the infant deaths occurring in 1945 and 1946. Many interesting observations resulted, but conclusive detailed analyses cannot be made until a larger body of data has been collected. It is anticipated that a pooling of four or five years' deaths will meet this requirement.

Of particular interest in the preliminary investigation is the relationship between infant mortality and economic status. It has been generally accepted

Based on a paper presented before the Epidemiology Section at the thirty-sixth annual meeting of the Canadian Public Health Association, held in the Hotel Vancouver, Vancouver, B.C., May 17-20, 1948.

in the past that infant mortality rates increased as the economic or financial status of the parents decreased. In fact, the Registrar-General of Scotland annually publishes a table of infant mortality in which the fathers are classified into five social groups, ranging from the labourers and unskilled callings to the professional and financially independent sections of the population. Those tables show conclusively that, for Scotland, infant mortality is influenced by the economic status of the father. Low income occupations have the highest infant mortality rates, while the professional occupations and those in high income brackets have the lowest rates.

In an attempt to determine what, if any, relationship existed in British Columbia between infant mortality and economic status, specific infant mortality rates were computed according to the occupation of the father. It is obvious, of course, that there is no ideal way of assessing the true economic status of the parents from the information given on vital statistics registrations. To obtain such precise information would entail a special investigation into every family from which a birth registration is received. However, broadly speaking, the occupational group to which a man belongs generally identifies him within certain income brackets. In the present analysis, groupings used were based on the broad occupational classifications followed by the Dominion Bureau of Statistics in the 1941 census, with slight modifications. Accountants and auditors were included with the professional group; farm labourers—a small group in British Columbia—were included with other labourers; and an additional group was established to which were allotted all owners and managers, regardless of trade.

TABLE I

INFANT MORTALITY RATES BY OCCUPATION OF FATHER, BRITISH COLUMBIA, 1945-1946
(Rates per 1,000 Live Births—Excluding Indians)

Occupation	Births†	Deaths	Rate per 1,000 Live Births
Clerical (excluding accountants and auditors)	1,429	23	16.1
Owners and Managers	1,965	52	26.5
Manufacturing and Mechanical*	6,775	186	27.5
Professional (including accountants and auditors)	2,091	58	27.7
Transportation and Communication*	3,823	109	28.5
Labourers (including farm labourers)	2,912	84	28.8
Construction*	2,911	102	35.0
Public Service Occupations	4,683	164	35.0
Farmers and Stock Raisers	3,218	115	35.7
Mining*	634	24	37.9
Trade and Finance*	1,747	69	39.5
Fishing, Hunting and Trapping	656	27	41.2
Logging*	1,457	67	46.0
Personal Service Occupations	715	40	55.9
Other and Not Stated	1,930	36	18.7
Total	36,946	1,156	31.3

*Excluding owners and managers.

†Since 6 per cent of the total infant deaths had to be excluded from the study due to lack of birth information (born ex-province, etc.), figures for the number of births were reduced 6 per cent accordingly.

The specific rates by occupational class are shown in Table I. It was found that, contrary to general opinion, no simple relationship between occupational class and infant mortality rates existed in British Columbia in these

years, as it appears to exist in certain other countries. The clerical group, which is by no means in a high income bracket, had by far the lowest rate in both years, and in both years the labouring group had a rate below the average of that for all groups combined. A slight tendency was evident for some of the better income occupations, such as owners and managers, and the professional class, to have infant mortality rates below the average; while certain other groups, whose families might be living in less advantageous circumstances, such as farmers, miners, fishermen, trappers and loggers, tended to have infant mortality rates higher than the average. However, there was no clear-cut evidence that rates increased as the apparent economic or financial status of the father decreased.

The table of specific rates by occupations is presented only to show the absence of the expected pattern of infant mortality rates. It is important to note that these specific rates cannot be taken to indicate the true ranking of each occupational class in the scale of infant mortality, since fairly wide fluctuations in the rates for the smaller sized groups might be expected purely as chance happenings. However, the rates do show that, at the present time, the usual concept of lowest rates in high income groups, and highest rates in low income groups, does not hold in this Province.

It should likewise be noted that, of the two years under review, one was a war year while the other carried throughout most of the abnormal conditions of the wartime economy. The pre-war pattern of the wage-scale had been considerably modified, with the common labourer as well as the skilled tradesman receiving substantially larger incomes. To what extent, if any, the increased wages may have influenced infant mortality amongst these groups is not immediately discernible. Again, the desired cross-classifications of infant mortality within these various occupational groups must await the accumulation of a larger fund of basic material. However, from the present figures, limited as they are, one can safely conclude that the conditions of life of the labouring and clerical workers in British Columbia are such that they do not adversely affect the survival of their children compared with those in better paid occupational groups, and, conversely, that any advantages that accrue to the high income classes do not materially reduce the risk of infant death in their ranks. This finding strongly suggests that some of the predisposing factors toward infant mortality will, in our present stage of health and social progress, be found in a more subtle guise than heretofore, when poverty, want and infection were overriding elements. It would seem that an investigation into the living habits of various groups in our society, as well as into their economic standing, might be more germane to a study of infant mortality.

Differences in the death rate between rural and urban areas present another aspect of infant mortality that warrants investigation. In British Columbia it is not very meaningful to compare rural and urban in the usual definition of those terms, due to the fact that much of the so-called rural population is resident in areas immediately adjacent to urban centres and has available the same facilities offered to those living in the urban areas. However, by considering the three major geographical regions of the Province, namely, the

TABLE II

INFANT MORTALITY RATES IN THE THREE MAJOR GEOGRAPHICAL REGIONS OF BRITISH COLUMBIA, 1945-1946
EXCLUDING INDIANS

Region	Census Areas	Births*	Infant Deaths	Rate per 1,000 Live Births
Northern	8, 9 & 10	2,273	94	41.4
Southern Interior	1, 2, 3 & 6	6,840	232	33.9
Coastal	4, 5 & 7	27,833	830	29.8
Total	British Columbia	36,946	1,156	31.3

*Since 6 per cent of the total infant deaths had to be excluded from the study due to lack of birth information (born ex-province, etc.), figures for the number of births were reduced 6 per cent accordingly.

coastal, the southern interior and the northern sections, three distinct levels of economic development were defined, and it was found that significant differences in infant mortality rates did exist amongst these areas. Table II shows the description of these three regions in terms of census areas, and the rates appropriate to each.

The northern region of British Columbia, where living conditions tend to be pioneer, had the highest infant mortality rate. One baby died in every 24 born in this region, giving a rate of 41.4 per 1,000 live births. In the southern interior section, where living conditions are better, the ratio was somewhat improved over the remote districts of the north. One baby died in infancy out of every 29 born in this area, or a rate of 33.9 per 1,000 live births. Finally, in the coastal section, which encompasses the two large metropolitan areas of the Province—Vancouver and Victoria—and the populous lower Fraser Valley, there was only one infant death in every 34 births, or a rate of 29.8 per 1,000 live births.

Caution is again necessary in interpreting these differential rates. Whether the higher rates in the more sparsely settled regions do reflect a general inadequacy of facilities and opportunity for proper prenatal, natal and postnatal care, as seems most to be expected, or whether a selection factor of a different nature is mainly responsible, is a question for further study and consideration.

Although infant mortality has experienced a gratifying reduction during the last quarter century, the problem is by no means resolved. In the various Provinces of Canada between 35 and 60 of every 1,000 babies born still fail to survive the first year of life. Having subdued some of the more tangible enemies of infancy, health and social agencies must now marshall their resources against the more elusive forces remaining. More and more, then, does it behoove our statistical departments to employ all means possible to throw into sharp relief the true causes of infant deaths, in order that effective action may be taken against them.

Histoplasmin Sensitivity*

II. A BRIEF STUDY OF THE INCIDENCE OF HYPERSENSITIVITY TO HISTOPLASMIN IN AN INDIAN TRIBE OF NORTHERN QUEBEC

ROLAND GUY[1], MAURICE PANISSET[1]
and ARMAND FRAPPIER[2]

IN a recent publication (1), we reported in this Journal the results of histoplasmin skin tests performed on 75 school children living in Beloeil, near Montreal, in Verchères County, Quebec. The findings prompted us to carry on further histoplasmin skin-testing, and we were given the opportunity to do so in an Indian reserve situated in the most northerly county of the province, the Abitibi-East County. This was done concurrently with the supervision of the mass B.C.G. vaccination program under way among the Indians of Quebec. We thought it of interest to compare the results obtained there with those which we have reported from a southern area of the same province.

All the new tests were performed at Obedjiwan. This area is a close weave of lakes and rivers called "Reservoir Gouin" near the dividing lines of the Abitibi-East County and the County of Laviolette. The Indians inhabiting Obedjiwan gather on the reservation during the summer and engage in trapping during the winter, most of them still migrating annually to their hunting grounds.

The skin tests with histoplasmin 1/1000 were carried out simultaneously with the serial tuberculin tests, using the Vollmer patch test and tuberculin P.P.D. 5 mgs. according to the procedure outlined in the publication already cited.

A total of 161 Indians of all ages and both sexes were tested with tuberculin and histoplasmin. The combined results of the cutaneous tests of the members of this particular tribe are shown in Table I.

TABLE I

COMBINED RESULTS OF THE CUTANEOUS TESTS OF THE OBEDJIWAN INDIANS

Number of Indians Tested	Tuberculin Reactors		Tuberculin and Histoplasmin Reactors		Histoplasmin Reactors	
	Number	Per cent	Number	Per cent	Number	Per cent
161	96	59.6	8	4.9	0	0

*From the Department of Experimental Tuberculosis, Institute of Microbiology and Hygiene and School of Hygiene, University of Montreal.
[1]Institute of Microbiology and Hygiene and School of Hygiene, University of Montreal.
[2]Director, Institute of Microbiology and Hygiene and School of Hygiene, University of Montreal.

Although 8 Indians were found to be positive to both tuberculin and histoplasmin, we were not able to find an individual who was positive only to the mycotic antigen.

It is interesting to compare our sets of results from Obedjiwan and Beloeil since these locations lie in geographically opposite directions, north and south. In our first report, the subjects were 5 to 15 years only. It is more accurate, then, to choose from the data of Obedjiwan those pertaining to the same age group. The comparison is shown in Table II.

For the same age groups, 5 to 15 years, at Beloeil 20 children were positive to histoplasmin, of whom half were also allergic to tuberculin, the remaining 10 children being positive to the mycotic antigen alone; in contrast, in the remote northern area of Obedjiwan, only one child was positive to histoplasmin and also hypersensitive to tuberculin. At Beloeil, for the age group 5 to 15 years, histoplasmin sensitivity (26.7 per cent) is almost as frequently found as tuberculin allergy (33.3 per cent), whereas at Obedjiwan, for the same age group, histoplasmin sensitivity (1.5 per cent) is negligible as compared with an important tuberculin hypersensitivity.

TABLE II

COMPARISON OF HISTOPLASMIN AND TUBERCULIN SENSITIVITIES IN THE SAME AGE GROUPS

Location	Number Tested	Negative to Tuberculin and Histoplasmin		Positive to Tuberculin Negative to Histoplasmin		Negative to Tuberculin Positive to Histoplasmin		Positive to Tuberculin and Histoplasmin	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Obedjiwan (North)	65	42	64.6	22	33.8	0	0	1	1.5
Beloeil (South)	75	40	53.3	15	20	10	13.3	10	13.3

The geographic distribution of histoplasmin sensitivity in the United States has shown a marked tendency to centralize in one section of endemic areas in the eastern-central United States, known as the Lower Mississippi Basin, comprising the territories drained by the Mississippi and Ohio Rivers. Beadenkopf *et al.* (2) have recently confirmed this prevalence of histoplasmin sensitivity in those already known endemic areas and have presented data to substantiate the fact that the states bordering the Province of Quebec may have as low an incidence of histoplasmin sensitivity as approximately 10 per cent. This is in complete accordance with the previous reports of Palmer (3), Furcolow, High and Allan (4), and Christie and Peterson (5). It may well be that the pattern of the geographic distribution of histoplasmin sensitivity in the Province of Quebec fits in with the picture of prevalence already mapped out by these authors. Palmer concluded his report by writing that the frequency

of positive reactors, in general, decreases with increasing distance from the area of high prevalence. The border states between the Province of Quebec and the United States would be the area VI of Palmer with a percentage of positive histoplasmin reactors of 10.1 corresponding to somewhat similar areas sketched out by Beadenkopf (6 to 7 per cent) and by Christie and Peterson (10.5 per cent).

The results of our short studies on histoplasmin sensitivity in far-distant opposite locations would confirm, to a certain extent, the law of prevalence as stated by Palmer. The location in southeastern Quebec reveals a percentage of 26.7 per cent as compared with 1.5 per cent obtained in one region of northwestern Quebec. The incidence of 26.7 per cent observed in Beloeil may seem somewhat higher than one would expect to find in an area so close to the border states, at the present time considered of low incidence. But Palmer's data from California, a state situated far from the endemic region, show that there may exist isolated foci, more severely infected, one area having a percentage of positive reactors of 17.6 as against 5 per cent for the whole state. On the other hand, as more extensive studies are carried on, large areas of region X of Palmer, reported as of low incidence, are now considered by other authors as areas of moderate infectivity.

The large-scale studies which we are now conducting in our Province may prove ours to be a region of general low incidence although we have some evidence that certain areas are moderately infected. Or the basin of the St. Lawrence River and its tributaries may constitute a more active focus of histoplasmin infection. Our results stand clearly below the percentages reported from areas of very high endemicity of the United States. For closely similar age groups, Sontag and Allen (6) have found an incidence as high as 66 per cent in the state of Ohio and Furcolow *et al.* 36 to 40 per cent in Missouri.

The latter authors have found some difference in the percentages of histoplasmin sensitivity between white and Negro children. They did not try to suggest any explanation for this slight prevalence among the white children and only remarked that socio-economic factors are not operative in the development of histoplasmin sensitivity, as is the case for tuberculin allergy. In our results, which compare white and Indian children, the striking difference found in histoplasmin sensitivity has no significant relation to the racial factor. We also believe geography to be the determining factor in the prevalence of positivity.

Summary

1. Histoplasmin skin tests, with histoplasmin 1/1000, were performed on 161 Indians of the reserve of Obedjiwan, situated in the Abitibi-East County, the most northerly county of the Province of Quebec. There were 8 positive reactors.

2. Comparative results of histoplasmin hypersensitivity were, for the age group 5 to 15 years, 1.5 per cent at Obedjiwan (north) and 26.7 per cent at Beloeil (south).

3. The suggestion is made that the geographic distribution of histoplasmin sensitivity in the Province of Quebec may follow the law of prevalence as expressed by Palmer for the distribution in the United States.

ACKNOWLEDGMENTS

The authors wish to express their thanks to Arden Howell Jr., Ph.D., Mycologist, Field Study Office, Tuberculosis Control Division, United States Public Health Service, who kindly supplied the histoplasmin used in this study. They are also greatly indebted to Dr. P. E. Moore and Dr. O. Leroux, director and assistant director, Indian Health Services, Department of National Health and Welfare, for their permission to carry out the histoplasmin skin tests. Also they wish to voice their appreciation of the valuable assistance of Mr. H. Lariviere, Superintendent, Abitibi Indian Agency, and of the careful work of Miss C. Drouin, R.N., who administered and interpreted the tuberculin tests.

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Canadian Journal of Public Health

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THE SEVENTH INTERNATIONAL CONGRESS ON RHEUMATIC DISEASES

FOR THE first time in ten years, and for the first time on this continent, leading clinicians and research workers in the field of the rheumatic diseases met in New York City from May 30th to June 3rd to attend the Seventh International Congress on Rheumatic Diseases, held under the auspices of the International League against Rheumatism. There were over 150 foreign delegates, representing more than twenty-five countries, and including some thirty delegates from Canada, as guests of the American Rheumatism Association.

The investigations reported included, as well as clinical subjects, experimental work in numerous scientific fields. The highlight of the conference was the presentation by Dr. Philip Hench of the investigations by him and his colleagues, Drs. Edward Kendall, Charles H. Slocumb and Howard F. Polley of the Mayo Clinic, on the effect of a hormone of the adrenal cortex (17-hydroxyl-11-dehydrocorticosterone: Compound E), now known as cortisone, and of pituitary adrenocorticotropic hormone, on rheumatoid arthritis. The dramatic results achieved were shown in coloured motion pictures. Cortisone has also been tried in a few patients with rheumatic fever, with encouraging results. Although these well controlled experiments are only preliminary in nature, they offer great hope for the future. It was pointed out, however, that the treatment will of necessity remain on a restricted investigative level, since a great deal of research remains to be done before the benefits of these findings will become generally available. The synthesis of cortisone from a precursor, desoxycholic acid, requires some thirty-six complicated steps. Until this intricate and costly procedure in organic chemistry is solved, the compound will only be available in exceedingly small quantities to a selected group of investigators.

These and other findings will undoubtedly stimulate much further investigation in the field of rheumatic diseases. This will necessitate co-ordination of clinical and scientific resources on a national scale, as well as increased expenditures for medical care and investigation. In order to study these problems, the Canadian Arthritis and Rheumatism Society was established in March 1948. Its task is not an easy one, and in order to carry out an effective program it will require the support of the general public as well as the profession throughout Canada.

*The Canadian Public Health Association 1948-1949**

REPORT OF THE EXECUTIVE COMMITTEE

IN 1948 definite progress towards the formation of Provincial Public Health Associations was made in three provinces. In addition to the Association which already exists in Alberta and is planning affiliation with the Canadian Public Health Association, the Quebec Société d'Hygiène et de Médecine Préventive held an Executive Committee meeting at which Doctor Baillie discussed affiliation. The response was favourable and the arrangements are being completed. The Ontario Health Officers Association has petitioned the Provincial Government for a new charter under the name of "The Ontario Public Health Association", and has expanded its membership to include all members of the public health team. At the annual meeting held in Toronto on April 25 and 26 the new charter was adopted. The question of affiliation with the Canadian Public Health Association will be dealt with at the next annual meeting. The Executive of the Saskatchewan Health Officers Association has renamed the organization "The Saskatchewan Public Health Association" and has elected officers. This group has requested that it be designated the Saskatchewan branch of the Canadian Public Health Association.

It is unnecessary to point out that this type of organization in the provinces will do much to provide a strong national public health organization. The Canadian Public Health Association plans to provide visiting speakers who will participate in the annual meetings of the provincial associations.

Membership

The response to date is encouraging. Over the past three years, many persons actively engaged in public health in Canada have realized that active membership in the Association, in addition to a subscription for the Canadian Journal of Public Health, is desirable. There are now 665 members in the Association: 199 in the Province of British Columbia; 21 in Alberta; 19 in Saskatchewan; 22 in Manitoba; 252 in Ontario; 118 in Quebec; 14 in New Brunswick; 16 in Nova Scotia; 3 in Prince Edward Island; and 1 in Newfoundland. It is hoped that next year a greater number will become active members.

The Study Committee on Public Health Practices

During the year the major part of the time of the staff has been spent in field studies in connection with the work of the Committee on Public Health Practice. A survey team consisting of Miss Lyle Creelman and Dr. Baillie visited every province in Canada and carried out a survey study in at least one urban area and one rural health unit in each province. A preliminary report on the findings of this study will be presented at this annual meeting.

**Reports presented at the thirty-seventh annual meeting of the Canadian Public Health Association, held in the Nova Scotian Hotel, Halifax, June 27-30, 1949.*

Committee on Salaries and Qualifications of Public Health Personnel

After having been approved by the Executive Committee, the first revision of the Report on Salaries and Qualifications of Public Health Personnel in Canada was endorsed by the Dominion Council of Health at its meeting in Ottawa on March 15, 1949, and published in the April issue of the Canadian Journal of Public Health. The report has been circulated to the appropriate authorities and, in addition, the Canadian Medical Association have indicated that they will suggest to their provincial divisions that the report receive the support of their membership.

Public Health as a Specialty

During the year the negotiations which were started in 1946 with the Royal College of Physicians and Surgeons of Canada were continued and the College requested the Association to nominate five of the Association's members as a possible Subcommittee on Public Health of the Royal College Committee on Certification of Specialists. The Executive Committee selected Dr. D. T. Fraser (chairman) and four other members: Dr. George R. Walton, Dr. Chester B. Stewart, Dr. Jules Gilbert, and Dr. J. H. Baillie. These names were submitted to the Royal College, which accepted them, and these five members of the Association are now the Subcommittee on Public Health of the Royal College Committee on Certification. To date, they have been working with the main committee on revising acceptable standards for candidates who wish to write the examinations for certification. The question of certification without examination for senior members in public health, the conducting of the examinations, and other pertinent problems are being discussed with the Royal College at present.

The American Board of Preventive Medicine and Public Health

This Board was formed in the United States, and as the Association acted as one of the sponsoring societies, the Executive Committee sent Dr. Baillie as its representative. The American Medical Association have approved of the Board and trustees have been chosen and applications are now being accepted. Dr. Walter Bierring, Des Moines, Iowa, is chairman of the Board and Dr. Ernest L. Stebbins, Baltimore, Maryland, is the secretary. Members of the Association who are interested in obtaining certification as specialists by the American Board of Preventive Medicine and Public Health, either by examination or as a member of the Founders' group, may procure application forms and further details by addressing the secretary—615 North Wolfe Street, Baltimore 5, Maryland. The first examination was held in Washington on May 15, 1949.

J. H. BAILLIE, M.D., D.P.H., *Executive Director.*

REPORT OF THE HONORARY TREASURER

ALTHOUGH the appended financial statements for the year ended December 31, 1948, indicate that there was a surplus of $3,600 after all expenses had been met, this was the result of special circumstances which tend to give the impression that the Association's financial position is much stronger than is the

case. During the year the Association received from the W. K. Kellogg Foundation a grant of $15,000 to conduct a study of public health practices in Canada; and as the Executive Director devoted the major portion of his time to this study, two-thirds of his salary, as well as half the salary of his secretary, has been paid by this grant. Had this not been the case, there would have been a deficit of more than $1,100. Moreover, during 1948 the Association received the last installments of the 1947-48 grant from the Canadian Life Insurance Officers Association, amounting to $1,750. Without this, the Association would not have been able to carry on its 1948 program without incurring a deficit. It is obvious, therefore, that the Association's income in the immediate future presents a serious problem.

Again in 1948 there were unavoidable and expected increases in publishing and mailing costs, as the Editor points out in his report. Although fewer copies of the Journal were printed than in 1947, the printing and mailing charges increased from $8,683 to $10,431, or 20 per cent. The average cost of each copy printed during 1948 was 30.2 cents, making a total of $3.62 for the twelve issues constituting an annual subscription. The revenue from advertising and from subscriptions and membership fees was sufficient to meet the publication costs and the salary of the assistant editor but did not cover secretarial assistance and office expenses. Since 1938 the charges for printing and mailing the Journal (12 issues) have increased from $5,067 to $10,431, or 106 per cent. Printing charges themselves have risen from $4,681 to $9,383, and mailing charges (including labour) from $386 to $1,048.

Fortunately, the revenue from advertising has increased considerably also, though it has not kept pace with the increase in publication costs. In 1948 the revenue from this source, less commissions paid to advertising agencies and the Association's advertising representative, was $6,828 as against a net figure of $5,482 in 1947. This was due largely to increases in the advertising rates that went into effect in March, 1948. Reflecting a general reduction in the volume of advertising, the gross revenue during the first five months of 1949 was considerably less than during the same period in 1947—$3,385 as against $3,807. This would indicate a reduction of at least $1,000 for the year.

Nineteen hundred and forty-eight was the first year in which a membership fee of $5.00 was charged. The revenue from this source was $6,571 as compared with $4,437 in 1947. A surprisingly large number of public health workers who receive the Journal through their departments of health have not taken out membership in the Association by paying the additional amount of $2.00. This may be due in part to the fact that, with the heavy commitments and limited office staff, it has not been possible to conduct a systematic membership campaign. Such an effort is required and it is hoped that it will be undertaken.

The Association's thirty-sixth annual meeting, held in Vancouver, May 17-20, 1948, was financed by the local committee through the sale of exhibit space and advertising space in a 72-page souvenir program. The revenue from these sources and from registration fees and the sale of tickets, etc., amounted to $9,223 and met the expenses, with the exception of travel expenses for the staff, so that the meeting represented a net loss to the Association of $688. The Christ-

mas meeting of the Laboratory Section was held in London on December 13 and 14, at a cost of $110.

Although the section of the financial statement relating to sanitary inspectors shows small credit balances, it must be remembered that the figures do not include any part of the salaries of those members of the staff who look after the examinations and the correspondence course. The certification of sanitary inspectors may, therefore, be regarded as a service which the Association is glad to render departments of health throughout Canada but which contributes little to the operating revenues.

Of the W. K. Kellogg Foundation's grant of $15,000 for the study of public health practices, $12,296 was expended during 1948. A further amount was voted to provide $7,500 for the first six months of 1949, in which period the work will be completed.

In addition to the Kellogg grant, the Association received three other grants in support of its general program: a grant of $5,000 from the Dominion of Canada, $2,500 from the Province of Ontario, and $400 from the Province of Saskatchewan. After the Association's books were closed for the year, a grant of $300 for 1948 was received from the Province of New Brunswick.

Through the interest of the Director of the School of Hygiene, University of Toronto, office space and other facilities have been supplied without charge. This represents a generous contribution, without which it would not be possible for the Association to continue its present program on such a limited budget.

WILLIAM MOSLEY, M.D., D.P.H., *Honorary Treasurer.*

CANADIAN PUBLIC HEALTH ASSOCIATION

BALANCE SHEET

AS AT 31st DECEMBER, 1948

ASSETS

Cash on Hand		$ 50.00	
Cash in Bank		7,907.29	
Accounts Receivable—Advertising	$ 995.00		
—Subscriptions	1,501.42		
—Reprints	13.42		
	$2,509.84		
Less: Reserve for Doubtful Accounts	35.00	2,474.84	
Deposit with Postmaster		15.00	$10,447.13
Investments—Province of Ontario, 4½% Bonds due in 1949—Cost			1,012.50
Canadian Journal of Public Health		$1,000.00	
Office Equipment	$ 916.59		
Less: Reserve for Depreciation	866.19	50.40	1,050.40
Prepaid Expenses			980.15
			$13,490.18

LIABILITIES

Accounts Payable	$1,583.73	
Prepaid Subscriptions	189.35	
Prepaid Fees—Correspondence Course	381.74	$ 2,154.82
Surplus		
Balance as at 31st December, 1947	$7,696.64	
Add		
Excess of Revenue over Expenditure for the year (See Schedule A)	3,638.72	
Balance as at 31st December, 1948		11,335.36
		$13,490.18

Submitted with our report of this date attached.

TORONTO, Ontario,
16th February, 1949.

HILL, TESKEY & Co.,
Chartered Accountants.

CANADIAN PUBLIC HEALTH ASSOCIATION

REVENUE ACCOUNT

FOR THE YEAR ENDED 31st DECEMBER, 1948

EXPENDITURE

Printing		$ 9,383.30
Postage on Magazines and Mailing Cost		1,048.42
Honoraria		177.00
Salaries		8,577.13
Stationery and Office Supplies		350.18
Postage, Telephone and Express		508.24
*Annual Meeting—Expenses	$794.97	
—Receipts	106.25	688.72
Travelling		434.62
Unemployment Insurance		102.78
Plan for Hospital Care		61.50
Miscellaneous Expense		534.28
Provision for Depreciation—Office Equipment		179.17
Discount allowed and Bank Charges		150.06
Salary Survey		1,438.58
Laboratory Section—Expenses	$303.02	
—Revenue	192.72	110.30
Bad Debts Written Off		114.50
		$23,858.78
Excess of Revenue over Expenditure for the year transferred to Surplus Account		3,638.72
		$27,497.50

*Travel expenses for office staff only.
Meeting was financed by Vancouver local committee.

REVENUE

Advertising		$ 8,693.00	
Less: Commissions paid		1,864.20	$ 6,828.80
Subscriptions and Membership Fees—less refunds			6,571.24
Grants—Canadian Life Insurance Officers Association			1,750.00
—Dominion of Canada			5,000.00
—Province of Ontario			2,500.00
—Province of Saskatchewan			400.00
—W. K. Kellogg Foundation Grant:		$15,000.00	
Expenditures:			
Salaries	$7,382.37		
Travelling	4,204.60		
Office Equipment and Supplies	685.14		
Miscellaneous	24.71	12,296.82	2,703.18
Sanitary Inspectors' Section—			
Examinations—Revenue		$ 1,065.30	
*Cost		435.98	629.32
Sales of Manual		$ 435.00	
Less: Cost		65.74	369.26
Reprints—Sales	$ 807.72		
—Cost	607.88		199.84
Correspondence Courses—			
Revenue		$ 824.67	
*Cost		323.81	500.86
Bond Interest			45.00
			$27,497.50

*Excluding Salaries.

REPORT OF THE EDITOR, CANADIAN JOURNAL OF PUBLIC HEALTH

VOLUME 39, 1948, contained seventy papers, in addition to editorials, section material, and Association reports. More than half of the papers came from annual meetings of the Association and related organizations:

Canadian Public Health Association:	
1947 meeting—Quebec	12 papers
1948 meeting—Vancouver	16 papers
1947 meeting of the Laboratory Section	4 papers; 28 abstracts
1948 meeting of the Laboratory Section	1 paper
Ontario Health Officers Association:	
1947 meeting	1 paper
1948 meeting	1 paper
Conference of State and Provincial Health Authorities of North America	2 papers
Royal College of Physicians and Surgeons of Canada	1 paper
Ontario Tuberculosis Association	1 paper
Canadian Institute of Sanitary Inspectors:	
British Columbia Branch	2 papers
Ontario Branch	1 paper

The outstanding feature of Volume 38 was the publication of four letters from Great Britain by Dr. Fraser Brockington, County Medical Officer for the West Riding of Yorkshire. In these letters Dr. Brockington has brought vividly to Canadian public health workers the developments in social medicine in Great Britain and the issues involved.

Circulation

In January of 1948 a new membership fee of $5.00, including a subscription for the Journal, was introduced. In previous years the provincial departments of health had enrolled practically all their personnel as subscribers, for a fee of one dollar a year. With the change in the membership basis, some departments enrolled their senior personnel as members of the Association, providing Journal subscriptions for others at a fee of $3.00 each, but ceasing in many cases to send the Journal to part-time personnel. Further, with the extension of full-time local health departments, the services of large numbers of part-time medical officers are no longer required, and the disappearance of their names has contributed to the decrease in circulation. It should be remembered, however, that while the number of subscribers is less, the Journal's position actually has improved, since it reaches more full-time personnel than ever before and thus has an even greater opportunity to be of service. At the present time the circulation is 2,500.

Advertising

The revenue from advertising in 1948 amounted to $6,828 after commissions paid to advertising agencies and the Association's advertising representative had been met. This represents an increase of $1,346 above the figure for 1947 and is attributable to a new schedule of advertising rates which went into effect in March. Thirty-five companies were represented in the twelve issues.

Printing Costs

As was to be expected, printing charges showed a further increase, rising from $8,229 in 1947 to $9,383, in spite of the fact that 500 fewer copies were printed each month and a reduction in the number of pages in certain issues was effected through the co-operation of authors in shortening their papers. Mailing charges, including labour and postage, were approximately the same as last year, $1,048; but this actually represents a slight increase since fewer copies were handled. The rise in publishing costs during the past eleven years is shown below.

	1948	1946	1942	1938
Printing Costs	$ 9,383.30	$7,748.96	$5,924.45	$4,681.18
Mailing Charges	1,048.42	934.80	712.04	386.29
	$10,431.72	$8,683.76	$6,636.49	$5,067.47

During 1948 the cost of printing and mailing the Journal averaged 30 cents a copy, making a total of $3.60 for each annual subscription. Fortunately, the revenue from advertising and from subscription and membership fees was sufficient to meet the publishing costs, including the salary of the assistant editor but not secretarial assistance and office expenses. However, publishing costs are not a legitimate charge on the membership fees, which ought to be available for other activities of the Association. Efforts will therefore have to be made to increase the revenue from advertising and subscriptions, so that the Journal may be self-sustaining.

During 1948 the Editorial Board undertook to publish for the Conference of State and Provincial Health Authorities of North America the Proceedings of its sixty-first annual meeting, held in Quebec in May 1947 in conjunction with the annual meeting of the Association. Included in this volume of seventy pages were nine papers presented at the Conference and published in the Journal in 1947 and 1948.

As is well known to members of the Association, the editing and publishing of the Journal is made possible by the services of Mr. Robert L. Randall, who, as assistant editor, has continued to overcome the many difficulties which face the Association in publishing the Journal.

R. D. DEFRIES, M.D., D.P.H.,
Editor, Canadian Journal of Public Health.

REPORT OF THE LABORATORY SECTION

THE sixteenth annual Christmas meeting of the Section was held in the Hotel London, London, Ontario, on December 13 and 14, 1948. A total of twenty-eight papers on a wide variety of interesting problems was presented. Approximately seventy laboratory workers from across Canada were in attendance, as well as a small American representation. A stimulating exchange of information and views by formal papers and discussion was enjoyed by the group as a whole.

The annual dinner meeting was privileged to hear an erudite address by Dr. Angus Graham, Research Associate in the Connaught Medical Research Laboratories, on problems in virus research. Distinguished guests at the dinner included Dr. Edward Hall, President of the University of Western Ontario, and Dr. J. B. Collip, Dean of the Faculty of Medicine.

The slate of officers elected at the business session for the ensuing year was as follows: Chairman, Dr. E. L. Barton, Toronto; Vice-chairman, Mr. James Gibbard, Ottawa; Secretary, Dr. F. O. Wishart, Toronto; Council: Dr. A. L. MacNabb, Guelph; Dr. A. Frappier, Montreal; Dr. E. G. D. Murray, Montreal; Dr. C. A. Mitchell, Ottawa; Dr. J. H. Orr, Kingston, and Dr. R. J. Gibbons, Ottawa.

Chief discussion at the business session centred about the formation of a Canadian Microbiological Council. A representative of the Canadian Phytopathological Society expressed the wish of his organization to proceed with Council formation. Varied opinions were expressed by members of the Laboratory Section and the executive was finally instructed to re-examine the position of the Section and to bring in a report at the next annual meeting.

The executive wish to express their indebtedness to Dr. R. G. E. Murray, Professor of Bacteriology and Immunology, The University of Western Ontario, for the excellent local arrangements.

The next annual meeting will be held in Toronto on December 16 and 17, 1949.

F. O. WISHART, M.A., M.D., D.P.H., *Secretary.*

REPORT OF THE VITAL STATISTICS SECTION

TWO meetings of the Section have been held since the annual meeting of the Association at Vancouver in May, 1948. As it was impossible to ensure maximum attendance of the Section members at the Association meetings at either Vancouver or Halifax, the Section Council arranged one-day sessions at Ottawa, immediately preceding the meetings of the Vital Statistics Council for Canada.

Annual Meeting, October 18, 1948

In view of several important Committee reports, the meeting was confined for the most part to presentation and discussion of these reports and other business. In addition, two papers were presented: "A Study of Infant Mortality Trends in British Columbia" which will be published in an early issue of the Journal and "The Reorganization of the Health and Welfare Division of the Dominion Bureau of Statistics", published in the May, 1949, number. Arising out of the discussion of the former, the Section authorized the Section Council to set up a Committee "to study the administrative problems associated with the collection of vital statistics as they relate to the Medical Officers of Health".

The Report of the Committee on Nomenclature and Nosology (the third in a series in connection with the Sixth Decennial Revision of the International List of Causes of Death) reviewed the work of the Committee in relation to

(*a*) the United States Committee on Joint Causes of Death,
(*b*) the Expert Committee of the World Health Organization and
(*c*) the Sixth Decennial Revision Conference in Paris (April, 1948).

The Chairman reviewed events leading to the official submission of Canada's recommendations, the main points and principles discussed by the Expert Committee of WHO, the adoption by some 29 nations of the International Statistical Classification of Diseases, Injuries and Causes of Death, and the discussions by the Expert Committee of proposals emanating from the Revision Conference. The significance in the field of vital and health statistics of the new List in providing a means for international comparability of both mortality and morbidity statistics, was underlined. The Section was advised that WHO had undertaken the printing of the Manuals required for use under the new "List" and that arrangements had been made for their distribution by the Dominion Bureau of Statistics to vital statistics and health agencies and organizations in Canada. Reference was made to the groundwork leading to the adoption of the "List" and to the part played by national organizations such as the Canadian Public Health Association.

This Committee has been extremely active within the past three years, particularly in connection with the preparatory work on the 1948 Revision of the International List of Causes of Death, and with the work of the Expert Committee of WHO, and will continue to be active in its capacity as a coordinating body on suggested changes to the International List. The Section went on record as expressing its whole-hearted appreciation of the work of the members of the Committee on behalf of the C.P.H.A., of the Section and of Canada.

Progress reports were submitted by other Committees—by the Stillbirth Registration and Certification Committee in connection with the drafting of

Canadian recommendations to the Expert Committee on Health Statistics of WHO relating to the definitions of "stillbirth" and "immaturity" (prematurity) and by the Committee on Certification of Causes of Death, relating to rules of preference in the classification of causes of death.

On the recommendation of the Committee to Review Section Committees that there was a growing need for a study of municipal health statistical practices, emanating from discussions at the 1947 annual meeting, the Section approved the setting up of a new Committee on Municipal Health Statistical Practices.

The recommendation that the functions of the Committee to Review Section Committees revert to the Section Council and that the Committee be dissolved was adopted by the Section.

In order to preserve greater continuity in the affairs of the Section from year to year, the Section adopted a resolution that the retiring chairman automatically continue as a member of the Section Council for one year following his retirement from the Chairmanship.

Annual Meeting, May 30, 1949

On behalf of the Chairman of the Committee on Nomenclature and Nosology, a report was presented outlining activity since the last meeting relating to the International Statistical Classification of Diseases, Injuries and Causes of Death, the work of the Expert Committee of WHO and related matters. Progress was reported on the establishment by several countries of "national committees" which will coordinate statistical activities within the respective member countries represented at the International Revision Conference (1948) and serve as links between the national medical-statistical institutions and the Expert Committee on Health Statistics of the World Health Organization. The Section was informed that plans have been virtually completed for the establishment of the National Committee for Canada, which will provide for representation from certain Departments of the Government of Canada, the provinces, the health professions, the voluntary health agencies and the university medical schools. This Committee is expected to meet shortly to review several important recommendations for submission to the WHO Expert Committee. The Section was informed that a "nuclear" Expert Committee of WHO had just met to discuss plans for a full meeting of the Committee, topics of major urgency, the setting up of special subcommittees (particularly on an international definition of "stillbirth" and "immaturity"), and other related problems. It was reported that Volume I (List of Categories, etc.) of the Manual relating to the International Statistical Classification had been distributed throughout Canada and that Volume II (Alphabetical Index) would be distributed as soon as received from Geneva by the Dominion Bureau of Statistics.

The Committee on Stillbirth Registration and Certification has been particularly active in assisting in the preparation of the technical material regarding the definitions of stillbirth and immaturity, to be submitted on behalf of Canada to the Expert Committee on Health Statistics (WHO). This Committee has also had referred to it for consideration and advice the revision of the Stillbirth Section of the Vital Statistics Handbook which is published by the Bureau of Statistics for use as a teaching medium in the University medical schools.

The Section stressed the necessity of a full meeting of the Committee and

urged that arrangements be made for such a meeting. It was pointed out that the Association might not be in a position to provide the funds necessary to bring this Committee together, but it was felt that funds might be found from another source. The Section further stressed the urgency of a standard definition of stillbirth.

The report of the Committee on Certification of Causes of Death pointed out that international developments in vital statistics in recent years have directed attention to many of the problems with which this Committee has been dealing for quite some time. These include: the need for a uniform medical certificate of death; the essential lack of international comparability of current cause-of-death statistics; the importance of the physician's certification and the need for teaching the elements of certification and other related problems. It was pointed out that with the adoption of the new "List" agreement has been reached on the following: the use of a common "International Form of Medical Certificate of Death"; the principle that responsibility for indicating the train of events leading to death should be placed on the certifying physician; the adoption of the "underlying cause" as the main cause for tabulation.

The Committee had been requested by the Vital Statistics Council for Canada to review certain joint-cause selection procedures and the application of supplementary rules where the general rule for the selection of the primary cause does not apply (as laid down in WHO regulations relating to the International List). The Committee also had referred to it for consideration and advice the "Registration of Death" section of the Vital Statistics Handbook. A preliminary report relating to these matters was submitted, and a final report will be tabled at the next annual meeting. The Section Council was authorized to take any necessary action prior to the next annual meeting and to transmit the report to the Dominion Bureau of Statistics (*a*) in connection with the classification and tabulation of the national cause-of-death statistics under the new List, effective January 1, 1950, and (*b*) in order that work might proceed with the revision of the Vital Statistics Handbook.

Other topics reviewed and discussed in connection with this Committee's report covered such items as the use of the Vital Statistics Handbook and the Physician's Pocket Reference; training in cause-of-death coding; querying of certificates; closer collaboration of the statistical officers with the medical profession; the effect of new coding procedures on mortality tabulations, and multiple cause tabulations.

The Section Committee which was set up at the 1948 meeting to study the accessibility of vital records to the local health officer has completed a good deal of the groundwork for its study. The Section adopted the Committee recommendation that the membership of the Committee be enlarged by the addition of a representative of the Department of Health of each province, and that provincial subcommittees be established to study the problem and make recommendations to meet local conditions and needs.

Progress reports were submitted by other committees and adopted by the Section. The chairmen of two committees requested that they be relieved of their duties as chairman because of other responsibilities, and the Section accordingly approved arrangements for the selection of two new chairmen.

A panel discussion on medical certification and classification of causes of death provided an opportunity for a full discussion of associated problems such as the establishment of minimum rules for classification; the classification of certain conditions or causes; the importance and essentiality of good certification and the means of acquainting the medical profession with the basic principles relating to the new List; instruction in coding procedures; the use of detailed, intermediate and abbreviated lists of causes of death for tabulation purposes; the classification of chronic and acute conditions; and querying procedures.

A paper by Dr. Forrest E. Linder, Chief of the Population and Vital Statistics Section of the United Nations Statistical Office, Lake Success, N.Y., outlined (*a*) the work of the United Nations in the field of population and vital statistics and a review of the work that lies ahead in these fields, and (*b*) the principles and mode of operation of the United Nations in the collection of statistical data, training and assistance programs, etc.

Two additional papers were presented to the Section, outlining (*a*) the salient features of a special study on heart disease mortality in the younger age groups, and (*b*) a summary of the work accomplished by the Hospital Statistics Conference which was held earlier in the year.

The Section unanimously approved the recommendation that the 1950 Section meeting be held with the parent organization if the annual convention is held in Toronto as proposed.

H. G. PAGE, M.A., *Secretary.*

REPORT OF THE COMMITTEE ON THE CERTIFICATION OF SANITARY INSPECTORS

AS the Committee enters its fifteenth year, it may be timely to review the development of the effort to define educational qualifications, to provide training facilities, and to establish the Certificate in Sanitary Inspection (Canada) as a satisfactory qualification for employment in this field in the Dominion.

1935—The first syllabus and regulations were issued in July. The first examinations for the Certificate in Sanitary Inspection (Canada) were held in December, with five candidates writing.

1937—The first edition of the "Manual for Sanitary Inspectors" was issued in June.

1938—In January notice was given that employed inspectors would have until January 1, 1939, to make application without being obliged to meet any educational requirement. In June the educational requirement for candidates who had not served as sanitary inspectors for at least one year was raised from two years to three years of high school or its equivalent.

1939—The educational requirement was raised to four years of high school or its equivalent.

1942—The educational standard was amended, as a temporary measure to meet war-time needs of health departments for sanitary inspectors, to require three years of high school or its equivalent. A correspondence course in sanitary inspection was introduced in November.

1944—Notice was given that on and after April 1, 1945, the standard required would be junior matriculation or its equivalent. An exception would be made in the case of ex-service personnel who had been with field hygiene sections or had had other training or experience related to the duties of sanitary inspectors; for candidates in this category the requirement would be two years of secondary-school work.

1947—On July 1, junior matriculation or its equivalent became the educational requirement for all applicants.

The Committee on the Certification of Sanitary Inspectors believes that the time has come to recommend the establishment of higher standards for personnel working in the field of sanitation. These qualifications can be classified under three headings: general education, special public health training, and field experience in public health. At the request of the Committee, the Association's Committee on Professional Education is drafting a Report on the Qualifications of Sanitarians and Sanitary Inspectors. The Canadian Institute of Sanitary Inspectors, following its meeting in Winnipeg in 1947, requested that consideration be given to the introduction of a certificate requiring higher educational qualifications and more extensive training. The preliminary draft of the report is now being considered by the Institute, and it is anticipated that the report will be presented to the Executive Council by the Committee on Professional Education at the Association's 1950 meeting in Toronto.

Facilities for more extensive training are already being provided in several Provinces with the financial assistance available under the National Health Program's professional training grant. A course, combining lectures and field work, has been in operation in Manitoba, and plans are being considered by the Department of Health of Ontario for a course providing lectures and field training. At the conclusion of these and similar courses, candidates will write the Association's examinations for the Certificate in Sanitary Inspection (Canada). The Association will continue to provide the correspondence course for candidates who are unable to take advantage of more comprehensive courses, but it is hoped that in the near future all candidates for the examinations will have adequate preparation through a course combining lectures with extensive practical training. It is planned that the training will include nine months of practical experience in an approved health department. As indicated above, candidates will receive a stipend under the professional training grant which will enable them to obtain adequate instruction and experience.

The 1948 examinations were held in the various provincial centres—Vancouver, Edmonton, Regina, Winnipeg, Toronto, Montreal, and Halifax—on September 15, 16 and 17. Of the 69 candidates, 60 were successful and 8 were conditioned in one subject, which they were allowed to repeat at a supplemental examination held in March, 1949.

Number of Candidates Obtaining the Certificate by Years, 1935-1948

1935—10	1943— 25
1936—32	1944— 42
1937—48	1945— 52
1938—44	1946—124
1939—46	1947— 41
1940—22	1948— 60
1941—35	
1942—30	Total—611

Thirty-five candidates were enrolled for the correspondence course in sanitary inspection during the 1948-49 session, which opened on October 24 and continued for a period of twenty-four weeks.

During the past year there has been a shortage of trained sanitary inspectors, notably in the Province of Ontario, where a number of health units have been

unable to find qualified men to fill vacant positions. Following the 1949 examinations, which will be held on September 14, 15 and 16, it is expected that these shortages will be overcome, as the number of candidates registered should be adequate to meet the demand: British Columbia 23, Saskatchewan 4, Manitoba 9, Ontario 54, Quebec 11, Nova Scotia 2, and Prince Edward Island 1—a total of 104. Thirty-three of the Ontario candidates have just completed a two-year course in institutional management at the University of Toronto.

A French edition of the Manual for Sanitary Inspectors is now in preparation and it is hoped that copies will be available by the end of the year. The translation is under the direction of Dr. Jules Gilbert of the School of Hygiene, University of Montreal, and some of his colleagues. Through the kindness of Dr. G. D. W. Cameron, Deputy Minister of Health, the Department of National Health and Welfare is giving invaluable assistance in the preparation of this French edition, which has been long awaited by inspectors in the Province of Quebec.

In conclusion, the Committee again expresses its appreciation of the co-operation of the members of provincial and municipal departments of health who have served as members of the provincial examining boards and have arranged programs of field work, often at considerable inconvenience to themselves.

A. E. BERRY, M.A.Sc., C.E., Ph.D., *Chairman.*

REPORT OF THE COMMITTEE ON PROFESSIONAL EDUCATION

FUNDAMENTAL to the advancement of public health is the establishing of qualifications and the defining of the responsibilities of those engaged professionally in the various fields of public health. The Committee on Professional Education is fortunate in having available the reports of the Committee on Professional Education of the American Public Health Association, which has prepared reports on the qualifications for the professional members of health department staffs. The related professional societies have been consulted in the preparation of the reports and the approval of the Association's members has been obtained after publication of the reports in the American Journal of Public Health. The Committee has extended its work to include the accreditation of schools of public health.

The Canadian Public Health Association's Committee on Professional Education has national representation and is fortunate in having a nucleus committee centrally located, to facilitate its functioning. During the past year the nucleus committee prepared a report on the qualifications of sanitarians and sanitary inspectors. The subject is being considered by representatives of the Canadian Institute of Sanitary Inspectors, but a formal communication respecting the report has not yet been presented to the committee by the Institute. When the Institute's views are received, the Committee on Professional Education will revise the report for publication in the Canadian Journal of Public Health, as a proposed report for consideration by members of the Association. The report, with any amendments, will then be presented to the Executive Council for final approval at the 1950 meeting in Toronto. This was the procedure followed in the

case of the three reports on educational qualifications which were adapted for Canadian use from the reports issued by the American Public Health Association: the Report on Educational Qualifications of Medical Health Officers, published in the July 1947 issue of the Journal; the Report on Educational Qualifications of Public Health Engineers, published in October 1947; and the Report on Educational Qualifications of Public Health Laboratory Workers, published in November 1947. These reports were presented to the Executive Council at the annual meeting in Vancouver in May 1948 and approved. Although it was planned to re-publish them in the Journal during the following months, the Committee felt that it was not necessary to do so, as only a few minor changes were made. In its final form, the Report on Educational Qualifications of Public Health Engineers does not contain the footnote that appeared on page 499 of the October 1947 issue, as its inclusion was not deemed necessary.

At the 1948 meeting the Committee on Professional Education was requested by the Executive Council to prepare, in co-operation with the Public Health Nursing Section, a report on the educational qualifications of public health nurses. At the request of the Section officers, action has been deferred until the report of the Association's Study of Public Health Practices in Canada is available.

The following members have been nominated to serve on the Committee for a period of one year from July 1, 1949: Dr. G. F. Amyot, Victoria; Dr. M. R. Bow, Edmonton; Dr. C. R. Donovan, Winnipeg; Dr. A. R. Foley, Quebec; Dr. C. F. W. Hames, Regina; Dr. J. A. Melanson, Fredericton; Dr. Leonard Miller, St. John's; Dr. J. S. Robertson, Halifax; and Dr. J. H. Shaw, Charlottetown. The members of the nucleus committee are: Dr. E. L. Barton, Dr. A. E. Berry, Dr. D. L. MacLean, Miss Edna L. Moore, Dr. L. A. Pequegnat, Dr. D. W. S. Puffer, Dr. R. G. Struthers and, ex-officio, Dr. J. H. Baillie.

R. D. DEFRIES, M.D., D.P.H., *Chairman.*

REPORT OF THE NATIONAL COMMITTEE FOR SCHOOL HEALTH RESEARCH

Sponsored by the Canadian Education Association and the Canadian Public Health Association

THE National Committee met twice during the year, in April and November, to discuss the current research studies and future projects which had been proposed. During 1948 some 8,000 copies of Report 2 were distributed. This is a report of mental health problems in Canadian schools and it was distributed through provincial departments of health and education, teacher-training institutions, and home-and-school groups.

The following is a topical outline of the research program in 1948.

I. Absentee Study

This research project is now completed and the report published. Three thousand copies of the report have been ordered and a limited number distributed free to each provincial department. In order to keep the printing expense within the budget it has been necessary to charge $1.00 a copy for this report. The

actual printing cost was approximately 95 cents a copy. The National Committee feels that this report should be studied by all educators and public health personnel at the administrative level. A condensation of the report is to be prepared immediately for use by teachers and parents.

II. Clover Bar School Division Study

The Clover Bar School Division lies in Alberta immediately south of Edmonton. This study aimed at the assessment of values to be derived from an in-service course in health education for teachers. The report, now completed, shows the effects of such a course on the school environment, pupils' food habits, attitudes, etc. It is intended to publish the report in a condensed form for limited distribution.

III. School Caretaking Study

This study is to result in a handbook for school caretakers and members of small school boards. The handbook is to contain explanatory material and actual procedures in the fields of (*a*) care of school floors, (*b*) school lighting, (*c*) heating and ventilation, and (*d*) cleaning and dusting. Materials have been gathered covering each of these fields, and two of the four sections are completed.

IV. The School Health Program in Each Province

This is a report of the medical and educational aspects of the total school health program. The Provincial Committee for School Health Research in each province is writing the report, which will become the first tangible contribution of these committees to the school health research program. The National Committee feels that this report will contribute greatly to an understanding of each provincial program as well as creating better liaison between the two provincial departments concerned.

V. Teacher-Training Study

All data have been gathered for a report on teacher-training in health and physical education. Every teacher-training institution in Canada has been included in both the elementary and secondary fields. This report will be completed in 1949.

VI. Research Studies

The following research studies have been discussed this year and have received priority rating as listed:

(*a*) A survey of vision and its relation to school achievement.
(*b*) A survey of hearing and its relation to school achievement.
(*c*) Safety education in Canadian schools.
(*d*) The motivation of health teaching at different age levels.
(*e*) Curriculum in health and physical education in all provinces.

There are many indications in Canada that the work of the National Committee for School Health Research is influencing the health of school children. In order that this influence may expand, the implementation of the research findings becomes most important. In the forthcoming year, increased emphasis on the implementation of the research reports will be a major concern.

A. J. PHILLIPS, Ph.D., *Research Director.*